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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,048	08/28/2001	Takeshi Nishi	SEL 274	5731

7590

06/03/2003

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EXAMINER

YAMNITZKY, MARIE ROSE

ART UNIT

PAPER NUMBER

1774

5

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,048

Applicant(s)

NISHI ET AL.

Examiner

Marie R. Yamnitzky

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2001 and 09 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-12 is/are rejected.
- 7) ☒ Claim(s) 1 and 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Figures 1A and 1B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. Claims 1 and 2 are objected to because of the following informalities:

In claim 1, the period needs to be moved from after the last word to after the formula. Appropriate correction is required. Claims 1 and 2 will be allowed upon correction of this informality.

3. Claims 3-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each of independent claims 3, 5, 7, 9 and 11 set forth that a specified layer is expressed by a specific formula. In requiring a layer to be expressed by a formula, it is not clear if the layer must consist of a compound of the specific formula, or if it is sufficient for the layer to comprise a compound of the specific formula.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Börner et al. (US 5,756,224).

See the whole patent. In particular, see Fig. 2, Fig. 4, column 1, lines 6-9, c. 2, l. 11-45 and 51-56, c. 3, l. 18-24 and 57-58, c. 4, l. 34-36, c. 5, l. 35-57 and c. 8, l. 26-57.

Börner et al. disclose compounds expressed by the formulae shown in present independent claims 5 and 7 for use in an n-type layer of an organic electroluminescent device. In the device structures depicted in figures 2 and 4 of the patent, the n-type layer is adjacent the organic luminescent layer. The n-type layer inherently functions as a hole blocking layer. In the organic luminescent layer, triplet excitation energy is converted into light which is emitted by the device.

6. Claims 5-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Grushin et al. (US 2002/0121638 A1).

See the whole published patent application. In particular, see paragraphs [0004], [0063]-[0071] and [0076], and see claim 13.

Grushin et al. disclose and claim a device comprising an emitting layer comprising an iridium compound, the device further comprising an electron transporting layer made from a compound of the formula shown in present claim 5 ("TAZ") or a compound of the formula shown in present claim 7 ("PBD"). The electron transporting layer made of either of these two compounds inherently functions as a hole blocking layer. An emitting layer comprising a phosphorescent iridium compound as in Grushin's devices converts triplet excitation energy into light which is emitted by the device.

7. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Fujita et al. (US 6,566,807 B1) also teach the use of a compound of the formula shown in present claim 7 in a "hole injection restraining" layer (i.e. a hole blocking layer). Fujita et al. teach that the adjacent luminescent layer may be made of known light emitting materials. In particular, see column 1, line 54-c. 2, l. 4, c. 9, l. 37-44, c. 10, l. 4-47 and Examples 13, 14 and 18.

8. Miscellaneous:

In each of independent claims 3, 5, 7, 9 and 11, the period needs to be moved from after the last word to after the formula.

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9. Claims 3, 4 and 9-12 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action and with correction of the placement of the period in claims 3, 9 and 11.

10. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (703) 308-4413. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax numbers for Art Unit 1774 are (703) 872-9311 for official after final faxes and (703) 872-9310 or (703) 305-5408 for all other official faxes. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (703) 872-9041.)

MRY
05/28/03



MARIE YAMNITZKY
PRIMARY EXAMINER

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